



DRAFT

Page 1 of 31
Permit No. ST 6122

Issuance Date: _____
Effective Date: July 1, 2010
Expiration Date: June 30, 2015

STATE WASTE DISCHARGE PERMIT NUMBER NO. ST 6122

State of Washington
DEPARTMENT OF ECOLOGY
Southwest Regional Office

In compliance with the provisions of the
State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington, as amended,
authorizes

National Frozen Food Corporation
188 Sturdevant Road
Chehalis, WA 98532

to discharge wastewater in accordance with the special and general conditions which follow.

Facility Location:

Processing Facility
436 NW State Street
Chehalis, Washington

Industry Type Vegetable Processor

SIC Code: 2037

Discharge Location:

Legal Description : Section, Range, Township

Field Number, Section, Township, Range

Field No. 1, SE, NW, Sec.18, T.14 N, R.2W
Field No. 2, NW, SE Sec.18, T.14 N, R.2W
Field No. 4, NE, NE, Sec.19, T.14 N, R.2W
Field No. 5, SW,SE sec.18, T.14 N, R.2W
Field No. 6, SW, NW, Sec.17, T.14 N, R.2W

Garin Schrieve, P.E.
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| SUMMARY OF PERMIT REPORT SUBMITTALS | 4 |
| SPECIAL CONDITIONS | |
| S1. Monitoring Schedule and DISCHARGE LIMITS | 5 |
| A. Wastewater Monitoring | |
| B. Ground Water Monitoring | |
| C. Soil Monitoring | |
| D. Crop Monitoring | |
| E. Surface Water Monitoring | |
| F. Sampling and Analytical Procedures | |
| G. Flow Measurement | |
| H. Laboratory Accreditation | |
| S2. REPORTING AND RECORDKEEPING REQUIREMENTS | 12 |
| A. Reporting | |
| C. Recording of Results | |
| D. Additional Monitoring by the Permittee | |
| E. Noncompliance Notification | |
| S3. FACILITY LOADING | 13 |
| S4. OPERATION AND MAINTENANCE | 14 |
| A. Operations and Maintenance Manual | |
| B. Bypass Procedures | |
| C. Irrigation Land Application | |
| S5. SOLID WASTE DISPOSAL | 16 |
| A. Solid Waste Handling | |
| B. Leachate | |
| C. Solid Waste Control Plan | |
| S7. HYRDOGEOLOGICAL REPORTS | |
| A. Summary Hydrogeological Report | |
| B. Annual Hydrogeological Reports | |
| S8. IRRIGATION AND CROP MANAGEMENT PLANs | 19 |
| A. Summary Irrigation and Crop Management Plan | |
| B. Annual Irrigation and Crop Management Plan | |
| GENERAL CONDITIONS | |
| G1. SIGNATORY REQUIREMENTS | 21 |
| G2. RIGHT OF ENTRY | 21 |
| G3. PERMIT ACTIONS | 22 |
| G4. REPORTING A CAUSE FOR MODIFICATION | 22 |
| G5. PLAN REVIEW REQUIRED | 22 |
| G6. COMPLIANCE WITH OTHER LAWS AND STATUTES | 22 |
| G7. DUTY TO REAPPLY | 22 |

DRAFT

Page 3 of 31
Permit No. ST 6122

| | | |
|-----------------|---|----|
| G8. | PERMIT TRANSFER | 22 |
| G9. | PAYMENT OF FEES..... | 23 |
| G10. | PENALTIES FOR VIOLATING PERMIT CONDITIONS | 23 |
| Appendix A..... | | 26 |

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

| Permit Section | Submittal | Frequency | First Submittal Date |
|-----------------------|---|---|--|
| S2.A. | Discharge Monitoring Report | Monthly Quarterly Annually Semi-Annual | August 15, 2010 October 15, 2010 August 15, 2011 April and November |
| S4.A. | Operations and Maintenance Manual Update | 1/permit cycle | January 1, 2014 |
| S5.C. | Solid Waste Control Plan Update | 1/permit cycle | January 1, 2014 |
| S6. | Work Plan for Additional Hydrogeologic Characterization | 1/permit cycle | October 1, 2010 |
| S7.A. | Summary Hydrogeological Report | 1/permit cycle | January 1 2014 |
| S7.B. | Annual Hydrogeological Report | 1/year | July 15, each year starting in 2011 |
| S8.A. | Summary Irrigation and Crop Management Plan | 1/permit cycle | January 1, 2014 |
| S8.B. | Annual Irrigation and Crop Management Plan | 1/year | April 15, each year starting in 2011 |
| G7. | Application for permit renewal | 1/permit cycle | January 1, 2014 |

SPECIAL CONDITIONS**S1. MONITORING SCHEDULE AND DISCHARGE LIMITS**

All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit. The discharge of any of the pollutants listed in S1. more frequently than, or at a concentration in excess of, that authorized by this permit violates the terms and conditions of this permit.

Beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to apply wastewater to land via spray irrigation at the rates recommended below on the following designated irrigation lands:

Field Number, Section, Township, Range

Field No. 1, SE, NW, Sec.18, T.14 N, R.2W

Field No. 2, NW, SE Sec.18, T.14 N, R.2W

Field No. 4, NE, NE, Sec.19, T.14 N, R.2W

Field No. 5, SW, SE, Sec.18, T.14 N, R.2W

Field No. 6, SW, NW, Sec.17, T.14 N, R.2W

A. Wastewater Monitoring

The Permittee must monitor the effluent at the effluent storage pond. The Permittee must monitor the wastewater according to the following schedule (Table 1):

Table 1- Monitoring Schedule

| Parameter | Units | Sample Point | Sampling Frequency | Sample Type |
|---|----------------|-----------------------|---------------------------|--------------------|
| Flow | MGD | Effluent Storage Pond | Monthly, when discharging | Metered |
| 5-day Biochemical Oxygen Demand | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Total Suspended Solids | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| pH | Standard Units | Effluent Storage Pond | Monthly, when discharging | Grab |
| Total Kjeldahl Nitrogen (as N) | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Total Nitrate Nitrogen NO ₃ (as N) | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Total Dissolved Solids | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |

| | | | | |
|--------------------------------|------|-----------------------|---------------------------|------|
| Volatile Dissolved Solids | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Chloride | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Sodium | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Ammonia NH ₃ (as N) | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |
| Total-Phosphorus (as P) | mg/L | Effluent Storage Pond | Monthly, when discharging | Grab |

Table 2- Agronomic Limitations

| PARAMETER | MAXIMUM |
|---|--|
| Total Dissolved Solids | As approved from Annual Irrigation and Crop Management Plan |
| Nitrogen | 200 lbs/acre for each field or as approved from Annual Irrigation and Crop Management Plan |
| 5-day Bio Oxygen Demand (BOD ₅) | 100 lbs/acre/day for each field or as approved from the Annual Irrigation and Crop Management Plan |

B. Ground Water Monitoring

The Permittee must monitor the monitoring wells as listed in the following table:

Table 3- Groundwater monitoring wells location

| Well Number | Latitude | Longitude |
|-------------|------------------|------------------|
| MW-1A | 46.68944 | 122.9647 |
| MW-1B | 46.69083 | 122.9667 |
| MW-2A | 46.68778 | 122.9753 |
| MW-2C | 46.69611 | 122.9775 |
| MW-2D | 46.69111 | 122.9772 |
| MW-2E | 46.68861 | 122.9708 |
| MW-2F | 46.69278 | 122.9753 |
| MW-3A | To be determined | To be determined |
| MW-3B | To be determined | To be determined |
| OW-1* | To be determined | To be determined |

*Water Level Only.

The Permittee must monitor the ground water according to the following schedule and limits at wells: MW-2A, MW-2C, MW-2D, MW-2E, MW-2F, MW-3A and MW-3B.

The Permittee must notify Ecology when it cannot conduct sampling due to high water conditions.

Table 4: Groundwater Monitoring Parameters and Permit Limits

| Parameter | Units | Daily Maximum | Sampling Frequency | Sample Type |
|-------------------------------------|----------------|---------------|------------------------|-------------|
| Ferrous Iron | +/- or mg/L | Report | Quarterly ¹ | Field Test |
| pH | Standard Units | Report | Quarterly ¹ | Field Test |
| Temperature | °C | Report | Quarterly ¹ | Field Test |
| Conductivity | Micromhos/cm | Report | Quarterly ¹ | Field Test |
| Dissolved Oxygen | mg/L | Report | Quarterly ¹ | Field Test |
| Total Coliform Bacteria | CFU/100mL | Report | Quarterly ¹ | Grab |
| Total Dissolved Solids | mg/L | 500 | Quarterly ¹ | Grab |
| Total Kjeldahl Nitrogen | mg/L | Report | Quarterly ¹ | Grab |
| Nitrogen, NH ₃ -N | mg/L | Background | Quarterly ¹ | Grab |
| NO ₃ +NO ₂ -N | mg/L | 10 | Quarterly ¹ | Grab |
| Total Nitrogen ² | mg/L | Background | Quarterly ¹ | Grab |
| Orthophosphate | mg/L | Report | Quarterly ¹ | Grab |
| Chloride | mg/L | 250 | Quarterly ¹ | Grab |
| Dissolved Organic Carbon | mg/L | Report | Quarterly ¹ | Grab |
| 5-Day Biochemical Oxygen Demand | mg/L | Background | Quarterly ¹ | Grab |
| Iron (Total) | mg/L | Report | Quarterly ¹ | Grab |
| Manganese (Total) | mg/L | Report | Quarterly ¹ | Grab |
| Calcium | mg/L | Report | Annual ³ | Grab |
| Magnesium | mg/L | Report | Annual ³ | Grab |

| Parameter | Units | Daily Maximum | Sampling Frequency | Sample Type |
|--|-------|---------------|---------------------|-------------|
| Sodium | mg/L | Report | Annual ³ | Grab |
| Potassium | mg/L | Report | Annual ³ | Grab |
| Carbonate | mg/L | Report | Annual ³ | Grab |
| Bicarbonate | mg/L | Report | Annual ³ | Grab |
| Sulfate | mg/L | Report | Annual ³ | Grab |
| ¹ Quarterly is defined as January-March, April-June, July-September and October-December. Quarterly sampling results must be reported on the DMR no later than the 15 th day of the month following the completed reporting quarter. The Chehalis River is flood prone, frequently experiencing floods that interfere with ground water sampling during late November or December. The Permittee must complete required 4 th quarter groundwater monitoring and sampling during October or early November (before November 15 th), prior to the onset of heavy fall/winter rains and subsequent river flooding. | | | | |
| ² Total Nitrogen=TKN+NO ₃ -N+NO ₂ -N. | | | | |
| ³ Annual sample to be obtained in October and reported on November DMR. | | | | |

Table 5: Permittee must monitor groundwater according to the following schedule at wells MW-1A and MW-1B

| Parameter | Units | Daily Maximum | Sample Frequency | Sample Type |
|--|----------------|---------------|---------------------|-------------|
| pH | Standard Units | Report | Annual ¹ | Field Test |
| Temperature | °C | Report | Annual ¹ | Field Test |
| Conductivity | micromhos/cm | Report | Annual ¹ | Field Test |
| Dissolved Oxygen | mg/L | Report | Annual ¹ | Field Test |
| Ferrous Iron | +/- or mg/L | Report | Annual ¹ | Field Test |
| Total Dissolved Solids | mg/L | Report | Annual ¹ | Grab |
| Chloride | mg/L | Report | Annual ¹ | Grab |
| NH ₃ -N | mg/L | Report | Annual ¹ | Grab |
| ¹ Annual sample to be obtained in October and reported on November DMR. | | | | |

The Permittee must measure water levels according to the following schedule at wells MW-1A, MW-1B, MW-2A, MW-2C, MW-2D, MW-2E, MW-2F, MW-3A, MW-3B and OW-1:

Table 6: Water level measurement schedule

| Parameter | Units | Limit | Sample Frequency | Sample Type |
|-------------|-------|--------|------------------|-------------|
| Water Level | Feet | Report | Quarterly | Measurement |

Water Level = Depth to water from the top of casing.

C. Soil Monitoring

1. Semi-Annual Monitoring

The Permittee must perform soil monitoring on the irrigation lands twice per year:

- Spring (March to April) sampling must occur prior to application of any fertilizer or wastewater.
- Fall (October to November) sampling must occur at the end of the growing season after the last wastewater application but prior to the onset of heavy fall/winter rains.

These sampling sites must be located so as to be representative of each irrigation site or as represented in the crop management plan. If possible, sampling sites shall remain in the same vicinity from year to year. Testing at each sampling site must be done on one foot soil increments. Results must be submitted annually with the annual Irrigation and Crop Management Plan.

Composite samples must be for depths as shown (or until auger refusal)] and must be from a minimum of four cores.

Table 7: Permittee must monitor the soils in the sprayfields according to the following list

| Parameter | Units | Report Only | Sampling Frequency | Sample Point | Sample Type | Depth Increments ¹ |
|---|----------|-------------|-------------------------|--------------|-------------|-------------------------------|
| Exchangeable sodium percentage | Percent | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Cation exchange capacity | meq/100g | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Organic matter | Percent | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Moisture content | Percent | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Total Kjeldahl Nitrogen (as N) | mg/Kg | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Total Nitrate Nitrogen NO ₃ (as N) | mg/Kg | Report | Twice/year ¹ | Each field | Composite | 0-12" and 36"-48" |
| NH ₃ (as N) | mg/Kg | Report | Twice/year ¹ | Each field | Composite | 0-12" and 36"-48" |
| Total-Phosphorous (as P) | mg/Kg | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Conductivity | mmhos/cm | Report | Twice/year ¹ | Each field | Composite | 0-12" and 36"-48" |
| Sodium | meq/100g | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Calcium | meq/100g | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Magnesium | meq/100g | Report | Twice/year ¹ | Each field | Composite | 0-12" |

| Parameter | Units | Report Only | Sampling Frequency | Sample Point | Sample Type | Depth Increments ¹ |
|----------------|-------|-------------|-------------------------|--------------|-------------|-------------------------------|
| Potassium | mg/Kg | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| Sulfate (as S) | mg/Kg | Report | Twice/year ¹ | Each field | Composite | 0-12" |
| pH | S.U. | Report | Twice/year ¹ | Each field | Composite | 0-12" |

¹ Twice a year in the Spring and Fall.

D. Crop Monitoring

The Permittee must perform crop monitoring on each field once per harvest at harvest time. Composite samples must be comprised of at least ten random samples collected from each field. Results must be submitted with the annual irrigation and crop management plan.

Table 8: Crop monitoring schedule

| Parameter | Units | Sampling Point | Report Only | Sampling Frequency | Sample Type |
|---|----------------|----------------|-------------|--------------------|-------------|
| Crop production | dry tons/ac | Each Field | Report | Once per harvest | Composite |
| Moisture content | Percent | Each Field | Report | Once per harvest | Composite |
| Total Kjeldahl Nitrogen | Percent | Each Field | Report | Once per harvest | Composite |
| Total Nitrate Nitrogen NO ₃ (as N) | mg/Kg (dry wt) | Each Field | Report | Once per harvest | Composite |
| Total Phosphorus (as P) | Percent | Each Field | Report | Once per harvest | Composite |
| Sodium | mg/Kg (dry wt) | Each Field | Report | Once per harvest | Composite |
| Magnesium | mg/Kg (dry wt) | Each Field | Report | Once per harvest | Composite |
| Potassium | mg/Kg (dry wt) | Each Field | Report | Once per harvest | Composite |
| Calcium | mg/Kg (dry wt) | Each Field | Report | Once per harvest | Composite |

E. Surface Water Monitoring

Table 9: Surface Water Sampling Locations

| Monitoring Point | Description |
|------------------|--------------------------------------|
| SW-1 | Point in river upstream of Field 4/5 |
| SW-2 | Point in river nearest to MW-2F |
| SW-3 | Point in river nearest to MW-3B |

The Permittee may propose substitute sites for these surface water sample locations at a more convenient site at any location downstream of the Chehalis Sewage Treatment Plant and upstream at the facility for the upstream sampling site, and downstream of Field 2 for the downstream sampling site plus one site in between these two. Annual Reports prepared for National Frozen Foods indicate that the substitute measuring sites chosen by NFF during the previous permitting period, do not provide the necessary data with an acceptable level of accuracy. National Frozen Foods must install the staff gauges described in the permit or propose an alternative that will provide accurate river surface elevation data. The Permittee must inspect and maintain the staff gauges after each major flood event.

Surface water must be monitored in the Chehalis River according to the following schedule.

Table 10: Surface Water Monitoring at SW-1, SW-2, and SW-3

| Parameter | Units | Report Only | Sampling Frequency | Sample Type |
|--|----------------|-------------|------------------------|-------------|
| Water Level | Feet above MSL | Report | Quarterly ^a | Measurement |
| ^a Quarterly is defined as January-March, April-June, July-September, October-December. Water levels shall be measured during the same time period as quarterly ground water monitoring well water level measurements and reported on the same DMRs as the associated groundwater monitoring data. | | | | |

F. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit must be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets and maintenance-related conditions affecting effluent quality.

Ground water sampling must conform to the latest protocols in the *Implementation Guidance for the Ground Water Quality Standards*, (Ecology 1996).

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 Code of Federal Regulations (CFR) Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Ecology).

All soil analysis and reporting will be in accordance with *Laboratory Procedures*, Soil Testing Laboratory, Washington State University, November 1981.

G. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices must be installed,

calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration must be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records must be maintained for at least three years.

H. Laboratory Accreditation

All monitoring data required by Ecology must be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 Washington Administrative Code (WAC). Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Testing for hazardous waste has not been included in the accreditation program. Testing for hazardous waste data must be provided by a lab accredited for similar parameters in water media. Crops and soil data must be tested by an agricultural laboratory that is an active participant in a nationally recognized agricultural laboratory proficiency testing program.

S2. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee must monitor and report in accordance with the following conditions. The falsification of information submitted to Ecology violates the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results must be submitted monthly. Monitoring data obtained during the previous monitoring period must be summarized and reported on a form provided, or otherwise approved, by Ecology, and be postmarked or received no later than the 15th day of the month following the completed reporting period, unless otherwise specified in this permit. The report(s) must be sent to:

Industrial Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge from the effluent storage pond during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the wastewater monitoring results.

B. Records Retention

The Permittee must retain records of all monitoring information for a minimum of three years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports

required by this permit, and records of all data used to complete the application for this permit. This period of retention must be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee must record the following information: (1) the date, exact place and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S1. of this permit, then the results of this monitoring must be included in calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the permit terms and conditions due to any cause, the Permittee must:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;
2. Repeat sampling and analysis of any violation and submit the results to Ecology within 30 days after becoming aware of the violation;
3. Immediately notify Ecology of the failure to comply; and
4. Submit a detailed written report to Ecology within thirty days, unless requested earlier by Ecology, describing the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, and any other pertinent information.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

F. Maintaining a Copy of This Permit

A copy of this permit must be kept at the facility and be made available upon request to Ecology inspectors.

S3. FACILITY LOADING

Design Criteria

The Summary Irrigation and Crop Management Plan will determine those flows or waste loadings of flow, Nitrate and TDS that must not be exceeded. Loading limits must be considered per field maximum daily loading capacity.

S4. OPERATION AND MAINTENANCE

The Permittee must at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Operations and Maintenance Manual

An Operations and Maintenance (O&M) Manual must be prepared by the Permittee in accordance with WAC 173-240-150 and be submitted to Ecology for approval no later than **January 1, 2014**. All manual changes or updates must be submitted to Ecology whenever they are incorporated into the manual. The approved operation and maintenance manual must be kept available at the permitted facility.

The operation and maintenance manual must contain the treatment plant process control monitoring schedule. All operators must follow the instructions and procedures of this manual.

The manual must include:

1. Emergency procedures for plant shutdown and cleanup in event of wastewater system upset or failure;
2. Irrigation system operational controls and procedures;
3. Protocols and procedures for ground water monitoring network sampling and testing.

B. Bypass Procedures

The Permittee must immediately notify Ecology of any spill, overflow, or bypass from any portion of the treatment system.

The bypass of wastes from any portion of the treatment system is prohibited unless one of the following conditions (1, 2, or 3) applies:

1. *Unavoidable Bypass* -- Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

If the resulting bypass from any portion of the treatment system results in noncompliance with this permit the Permittee must notify Ecology in accordance with condition S3.E "Noncompliance Notification."

2. *Anticipated Bypass That Has The Potential to Violate Permit Limits or Conditions* -- Bypass is authorized by an administrative order issued by Ecology. The Permittee must notify Ecology at least 30 days before the planned date of bypass. The notice must contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. Ecology will consider the following prior to issuing an administrative order:
 - a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of the permit.
 - b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
 - c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under Revised Code of Washington (RCW) 90.48.120.

3. *Bypass For Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions* -- Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of the permit, or adversely impact public health as determined by Ecology prior to the bypass.

C. Irrigation Land Application

1. There must be no runoff of wastewater applied to land by spray irrigation to any surface waters of the state or to any land not owned by or under control of the Permittee.
2. The Permittee must use recognized good practices, and all available and reasonable procedures to control odors from the land application system. When notified by Ecology, the Permittee must implement measures to reduce odors to a reasonable minimum.
3. The wastewater must not be applied to the irrigation lands in quantities that:
 - a. Significantly reduce or destroy the long-term infiltration rate of the soil.
 - b. Would cause long-term anaerobic conditions in the soil.

- c. Would cause ponding of wastewater and produce objectionable odors or support insects or vectors.
 - d. Would cause leaching losses of constituents of concern beyond the treatment zone or in excess of the approved design. Constituents of concern are constituents in the wastewater, partial decomposition products, or soil constituents that would alter ground water quality in amounts that would affect current and future beneficial uses.
 - e. That exceed monthly crop evapotranspiration and nitrogen uptake estimates. AKART for land treatment facilities requires that wastewater applications correspond as closely as possible to the crops needs and capacity to provide treatment. This requirement must be closely followed near the end of the growing season, in September and October.
4. The Permittee must maintain all irrigation agreements for lands not owned for the duration of the permit cycle. Any reduction in irrigation lands by termination of any irrigation agreements may result in permit modification or revocation. The Permittee must immediately inform Ecology in writing of any proposed changes to existing agreements.

S5. SOLID WASTE DISPOSAL

A. Solid Waste Handling

The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

B. Leachate

The Permittee must not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee must apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

C. Solid Waste Control Plan

The solid waste information furnished with the permit application will satisfy the necessity for a solid waste control plan. Should this arrangement cease to operate, a solid waste control plan must be submitted by the Permittee as follows:

A solid waste plan must include all solid wastes with the exception of those solid wastes regulated by Chapter 173-303 WAC (Dangerous Waste Regulations). The plan must include at a minimum a description, source, generation rate, and disposal methods of these solid wastes. This plan must not be at variance with any approved local solid waste management plan. Any proposed revision or modification of the solid waste handling plan must be submitted to Ecology. The

Permittee must comply with the plan and any modifications thereof. The Permittee must submit an update of the solid waste control plan with the application for permit renewal no later than **January 1, 2014**.

S6. ADDITIONAL HYDROGEOLOGIC CHARACTERIZATION

The Permittee must prepare and submit no later than **October 1, 2010**, to Ecology a Work Plan to complete the installation of 3 river level measuring stations. The Work Plan must include the following work elements:

- Three staff gages must be installed in the Chehalis River at the approximate locations show in Figure 1 (Appendix A). The staff gages will provide the water level elevations of the Chehalis River. The Permittee proposed alternative methods during the last permitting period that have proved to be unable to provide accurate water level data. The Permittee may propose alternative methods for determining water surface elevation subject to Ecology's approval. The Permittee must inspect and maintain staff gauges after each major flood event.
- Survey the staff gages to the same datum as the existing monitoring network.
- Conduct insitu hydrologic testing (slug tests or short term pumping tests) at each monitoring well. These data should be evaluated to estimate the distribution of hydraulic conductivity in the shallow aquifer.

All drilling and well installation must meet the requirements the Minimum Standards for Construction and Maintenance of Wells Chapter 173-160 WAC. Prior to initiating field activities NFF should prepare a detailed work plan that describes the methods that will be used to complete this work. The plan must be submitted to Ecology for review within three months of the effective date of this permit. The staff gage installations and surveys must be completed by **July 2011**.

S7. HYDROGEOLOGICAL REPORTS

A. Summary Hydrogeological Report

A Summary Hydrogeological Report must be prepared using data obtained from the annual Hydrogeological Reports submitted during the term of the previous permits and the monitoring data obtained and reported on the DMR reports during the term of the previous permit. This document will be submitted on or before **January 1, 2014**. The Summary Hydrogeological Report should describe the hydrogeological conditions at the application fields including direction and rates of groundwater flow and seasonal variation, a summary of water quality results, a comparison of upgradient and downgradient water quality results, and wastewater loading estimates for each field for contaminants of concern. The report should provide all data collected over the monitoring period including:

1. A figure showing the location of the fields, monitoring stations, the Chehalis River, and other relevant site features
2. As-built diagrams for all monitoring wells

3. Measuring point elevations for all monitoring stations
4. Water level data obtained from all monitoring stations including hydrographs for representative stations
5. Water-table contour maps that show seasonal variation of groundwater flow direction
6. Hydrologic test results for wells and soil samples
7. Water quality results for all stations.

The purpose of the summary report is to compile and display all ground water data collected at the facility with special emphasis on the data collected over the last five years (the permit interval). These data should be evaluated for trends to assist with the preparation of the new permit to be issued for the next permit cycle. Ecology will retain this requirement in the permit. This report could be combined with the Summary Irrigation and Crop Management Plan.

B. Annual Hydrogeological Reports

An annual Hydrogeological Report must be submitted **on or before July 15 each** year Ecology review. The Annual Hydrogeologic Report should describe (for the monitoring period) all hydrogeologic studies and any new monitoring stations installed, the hydrogeologic conditions at the application fields including direction and rates of groundwater flow and seasonal variation, a summary of water quality results, and a comparison of upgradient and downgradient water quality. The annual hydrogeologic report should provide all data collected over the monitoring period including:

1. A figure showing the location of the fields, monitoring stations, the Chehalis River, and other relevant site features
2. As-built diagrams for all new monitoring wells
3. Measuring point elevations for all monitoring stations
4. Water level data obtained from all monitoring stations including hydrographs for representative stations
5. Water-table contour maps that show seasonal variation of groundwater flow direction
6. Hydrologic test results for wells and soil samples
7. Water quality results for all stations.

S8. IRRIGATION AND CROP MANAGEMENT PLANS

A. Summary Irrigation and Crop Management Plan

A Summary Irrigation and Crop Management Plan must be prepared using data obtained from the Annual Irrigation and Crop Management Plans submitted during the term of the previous permit and the monitoring data obtained and reported on the DMR reports during the term of the previous permit. This document will be submitted on or before **January 1, 2014**. This study should propose the following:

1. Limits for the application of irrigation water to the fields including the calculations from which these limits were obtained. These limits must be specific to month and field.
2. Limits for the application of nutrients to the various fields including the calculations from which these limits were obtained. These limits should be chosen to prevent any increase over background for nitrogen, flow, or total dissolved solids in the downstream monitoring wells. These limits must be specific to month and field.
3. Ecology will check this report for adequacy.

The purpose of the summary report is to compile and display all wastewater application and crop management data collected at the facility with special emphasis on the data collected over the last five years (the permit interval). This data should be evaluated for trends to assist with the preparation of the new permit to be issued for the next permit cycle. Ecology will retain the requirement in the permit. This report could be combined with the Summary Hydrogeologic Report. Adequacy is determined by best professional judgment.

B. Annual Irrigation and Crop Management Plan

An Irrigation and Crop Management Plan must be submitted annually **by April 15** each year for Ecology's review. The plan must generally conform with Guidelines for *Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology 1993. The plan must be prepared by a soil scientist. The plan must include the following elements:

1. Annual Summary of Farm Operations for Previous Year

This summary must include:

- a. For each crop grown, the total acreage and quantity harvested.
- b. Calculated balances for nutrients, salts, TDS, or other design limiting parameters. The calculations must include crop consumptive use, process wastewater loadings of nutrients, salts, TDS or other design limiting parameters, and contributions from commercial fertilizers applied.

- c. Calculated water balance. The calculations must include irrigation system efficiency and application uniformity, the quantity of supplemental irrigation water and process wastewater applied, crop consumptive use, water stored in the soil profile outside the normal growing season, and salt leaching requirements.
- d. Soil testing results. A summary of the soil testing results must be submitted and discussed as part of the annual Irrigation and Crop Management Plan.

2. Cropping Schedule for Upcoming Year

This schedule must include:

- a. Crop Management. The proposed acreage for each crop, cultivation and harvesting requirements, expected crop yields, and methods for establishing a crop, and proposed schedule for herbicide, pesticide, and fertilizer application.
- b. Irrigation Management. The frequency and timing of wastewater and supplemental irrigation water application (including harvest and non-harvest periods), and recommended rest cycles for wastewater application where organic or hydraulic loading is a concern.

GENERAL CONDITIONS**G1. SIGNATORY REQUIREMENTS**

All applications, reports, or information submitted to Ecology must be signed as follows:

- A. All permit applications must be signed by either a principal executive officer or ranking elected official.
- B. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by the person described above and is submitted to Ecology at the time of authorization, and
 - 2. The authorization specifies either a named individual or any individual occupying a named position.
- C. Changes to authorization. If an authorization under paragraph B.2. above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section must make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF ENTRY

Representatives of Ecology must have the right to enter at all reasonable times in or upon any property, public or for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state. Reasonable times shall include normal business hours; hours during which production, treatment, or discharge occurs; or times when Ecology suspects a violation requiring immediate inspection. Representatives of Ecology must be allowed to have access to, and copy at reasonable cost, any records required to be kept under terms and conditions of the permit; to inspect any monitoring equipment or method required in the permit; and to sample the discharge, waste treatment processes, or internal waste streams.

G3. PERMIT ACTIONS

This permit shall be subject to modification, suspension, or termination, in whole or in part by Ecology for any of the following causes:

- A. Violation of any permit term or condition;
- B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;
- C. A material change in quantity or type of waste disposal;
- D. A material change in the condition of the waters of the state; or
- E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

Ecology may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application, or a supplement to the previous application, along with required engineering plans and reports, whenever a new or increased discharge or change in the nature of the discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least 60 days prior to any proposed changes. Submission of this application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications should be submitted at least 180 days prior to the planned start of construction. Facilities must be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in the permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee must apply for permit renewal by **January 1, 2014**.

G8. PERMIT TRANSFER

This permit is automatically transferred to a new owner or operator if:

- A. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to Ecology;
- B. A copy of the permit is provided to the new owner and;
- C. Ecology does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to section A. above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by Ecology.

G9. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

G10. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation.



Figure 1. National Frozen Foods Monitoring Network.

APPENDIX A**EFFLUENT CHARACTERIZATION FOR POLLUTANTS****THIS LIST INCLUDES EPA REQUIRED POLLUTANTS (PRIORITY POLLUTANTS) AND SOME ECOLOGY PRIORITY TOXIC CHEMICALS (PBTs)**

The following table with analytical methods and levels is to be used as guidance for effluent characterization in NPDES permit applications, applications for permit renewal, and monitoring required by permit. This attachment is used in conjunction with Section V, Parts A, B, and C of EPA Application Form 2C, Parts A.12, B.6, and D of EPA application form 2A and with State applications. This attachment specifies effluent characterization requirements of the Department of Ecology. For application, analyze your wastewater for all parameters required by the application and any additional pollutants with an X in the left column. The data should be compiled from last year's data if it is a parameter routinely measured. If you are a primary industry category with effluent guidelines you may have some mandatory testing requirements (see Table 2C-2 of Form 2C). If you are a municipal POTW you also have some mandatory testing requirements which are dependent upon the design flow (see EPA form 2A).

The permit applications will specify the groups of compounds to be analyzed. Ecology may require additional pollutants to be analyzed within a group. The objectives are to reduce the number of analytical "non-detects" in applications and to measure effluent concentrations near or below criteria values where possible at a reasonable cost. If an applicant or Permittee knows that an alternate, less sensitive method (higher DL and QL) from 40 CFR Part 136 is sufficient to produce measurable results in their effluent, that method may be used for analysis.

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² µg/L unless specified | Quantitation Level (QL)³ µg/L unless specified |
|--------------|---|--|---|--|
| ¹ | CONVENTIONALS | | | |
| | Biochemical Oxygen Demand | SM5210-B | | 2 mg/L |
| | Chemical Oxygen Demand | SM5220-D | | 10 mg/L |
| | Total Organic Carbon | SM5310-B/C/D | | 1 mg/L |
| | Total Suspended Solids | SM2540-D | | 5 mg/L |
| | Total Ammonia (as N) | SM4500-NH3- GH | | 0.3 mg/L |
| | Flow | Calibrated device | | |
| | Dissolved oxygen | 4500-OC/OG | | 0.2 mg/L |
| | Temperature (max. 7-day avg.) | Analog recorder or Use micro-recording devices known as thermistors | | 0.2° C |
| | pH | SM4500-H ⁺ B | N/A | N/A |
| ¹ | NONCONVENTIONALS | | | |
| | Total Alkalinity | SM2320-B | | 5 mg/L as CaCo3 |

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² µg/L unless specified | Quantitation Level (QL)³ µg/L unless specified |
|--------------|---|--|---|--|
| | Bromide (24959-67-9) | 4110 B | 100 | 400 |
| | Chlorine, Total Residual | 4500 Cl G | | 50.0 |
| | Color | SM2120 B/C/E | | 10 color unit |
| | Fecal Coliform | SM 9221E | N/A | N/A |
| | Fluoride (16984-48-8) | SM4500-F E | 25 | 100 |
| | Nitrate-Nitrite (as N) | 4500-NO3- E/F/H | | 100 |
| | Nitrogen, Total Kjeldahl (as N) | 4500-NH3-C/E/FG | | 300 |
| | Ortho-Phosphate (PO ₄ as P) | 4500- PE/PF | 30 | 100 |
| | Phosphorus, Total (as P) | 4500-PE/PF | 30 | 100 |
| | Oil and Grease (HEM) | 1664A | | 5,000 |
| | Radioactivity | Table 1E | | |
| | Salinity | SM2520-B | | 3 PSS |
| | Settleable Solids | SM2540 -F | | 100 |
| | Sulfate (as mg/L SO ₄) | SM4110-B | | 200 |
| | Sulfide (as mg/L S) | 4500-S ² F/D/E/G | | 200 |
| | Sulfite (as mg/L SO ₃) | SM4500-SO3B | | 2000 |
| | Surfactants | SM5540 C | | 50 |
| | Total dissolved solids | SM2540 C | | 20 mg/L |
| | Total Hardness | 2340B | | 200 as CaCO ₃ |
| | Aluminum, Total (7429-90-5) | 200.8 | 2.0 | 10 |
| | Barium Total (7440-39-3) | 200.8 | 0.5 | 2.0 |
| | Boron Total (7440-42-8) | 200.8 | 2.0 | 10.0 |
| | Cobalt, Total (7440-48-4) | 200.8 | 0.05 | 0.25 |
| | Iron, Total (7439-89-6) | 200.8 | 12.5 | 50 |
| | Magnesium, Total (7439-95-4) | 200.8 | 10 | 50 |
| | Molybdenum, Total (7439-98-7) | 200.8 | 0.1 | 0.5 |
| | Manganese, Total (7439-96-5) | 200.8 | 0.1 | 0.5 |
| | Tin, Total (7440-31-5) | 200.8 | 0.3 | 1.5 |
| | Titanium, Total (7440-32-6) | 200.8 | 0.5 | 2.5 |
| ¹ | METALS, CYANIDE & TOTAL PHENOLS | | | |
| | Antimony, Total (7440-36-0) | 200.8 | 0.3 | 1.0 |
| | Arsenic, Total (7440-38-2) | 200.8 | 0.1 | 0.5 |
| | Beryllium, Total (7440-41-7) | 200.8 | 0.1 | 0.5 |
| | Cadmium, Total (7440-43-9) | 200.8 | 0.05 | 0.25 |
| | Chromium (hex) dissolved (185-402-99) | SM3500-Cr EC | 0.3 | 1.2 |
| | Chromium, Total (7440-47-3) | 200.8 | 0.2 | 1.0 |
| | Copper, Total (7440-50-8) | 200.8 | 0.4 | 2.0 |
| | Lead, Total (7439-92-1) | 200.8 | 0.1 | 0.5 |

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² µg/L unless specified | Quantitation Level (QL)³ µg/L unless specified |
|--------------|--|--|---|--|
| | Mercury, Total (7439-97-6) | 1631E | 0.0002 | 0.0005 |
| | Nickel, Total (7440-02-0) | 200.8 | 0.1 | 0.5 |
| | Selenium, Total (7782-49-2) | 200.8 | 1.0 | 1.0 |
| | Silver, Total (7440-22-4) | 200.8 | 0.04 | 0.2 |
| | Thallium, Total (7440-28-0) | 200.8 | 0.09 | 0.36 |
| | Zinc, Total (7440-66-6) | 200.8 | 0.5 | 2.5 |
| | Cyanide, Total (7440-66-6) | 335.4 | 5 | 10 |
| | Cyanide, Available | SM4500-CN G | 5 | 10 |
| | Phenols, Total | EPA 420.1 | | 50 |
| | DIOXIN | | | |
| | 2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin (176-40-16) | 1613B | 1.3 pg/L | 5 pg/L |
| ¹ | VOLATILE COMPOUNDS | | | |
| | Acrolein (107-02-8) | 624 | 5 | 10 |
| | Acrylonitrile (107-13-1) | 624 | 1.0 | 2.0 |
| | Benzene (71-43-2) | 624 | 1.0 | 2.0 |
| | Bis(2-Chloroethyl)ether (111-44-4) | 611/625 | 1.0 | 2.0 |
| | Bis(2-Chloroisopropyl) ether (108-60-1) | 611/625 | 1.0 | 2.0 |
| | Bromoform (75-25-2) | 624 | 1.0 | 2.0 |
| | Carbon tetrachloride (108-90-7) | 624/601 or SM6230B | 1.0 | 2.0 |
| | Chlorobenzene (108-90-7) | 624 | 1.0 | 2.0 |
| | Chloroethane (75-00-3) | 624/601 | 1.0 | 2.0 |
| | 2-Chloroethylvinyl Ether (110-75-8) | 624 | 1.0 | 2.0 |
| | Chloroform (67-66-3) | 624 or SM6210B | 1.0 | 2.0 |
| | Dibromochloromethane (124-48-1) | 624 | 1.0 | 2.0 |
| | 1,2-Dichlorobenzene (95-50-1) | 624 | 1.9 | 7.6 |
| | 1,3-Dichlorobenzene (541-73-1) | 624 | 1.9 | 7.6 |
| | 1,4-Dichlorobenzene (106-46-7) | 624 | 4.4 | 17.6 |
| | 3,3'-Dichlorobenzidine (91-94-1) | 605/625 | 0.5 | 1.0 |
| | Dichlorobromomethane (75-27-4) | 624 | 1.0 | 2.0 |
| | 1,1-Dichloroethane (75-34-3) | 624 | 1.0 | 2.0 |
| | 1,2-Dichloroethane (107-06-2) | 624 | 1.0 | 2.0 |
| | 1,1-Dichloroethylene (75-35-4) | 624 | 1.0 | 2.0 |

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² µg/L unless specified | Quantitation Level (QL)³ µg/L unless specified |
|--------------|--|--|---|--|
| | 1,2-Dichloropropane (78-87-5) | 624 | 1.0 | 2.0 |
| | 1,3-dichloropropylene (mixed isomers) (542-75-6) | 624 | 1.0 | 2.0 |
| | Ethylbenzene (100-41-4) | 624 | 1.0 | 2.0 |
| | Methyl bromide (74-83-9) (Bromomethane) | 624/601 | 5.0 | 10.0 |
| | Methyl chloride (74-87-3) (Chloromethane) | 624 | 1.0 | 2.0 |
| | Methylene chloride (75-09-2) | 624 | 5.0 | 10.0 |
| | 1,1,2,2-Tetrachloroethane (79-34-5) | 624 | 1.9 | 2.0 |
| | Tetrachloroethylene (127-18-4) | 624 | 1.0 | 2.0 |
| | Toulene (108-88-3) | 624 | 1.0 | 2.0 |
| | 1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride) | 624 | 1.0 | 2.0 |
| | 1,1,1-Trichloroethane (71-55-6) | 624 | 1.0 | 2.0 |
| | 1,1,2-Trichloroethane (79-00-5) | 624 | 1.0 | 2.0 |
| | Trichloroethylene (79-01-6) | 624 | 1.0 | 2.0 |
| | Vinyl chloride (75-01-4) | 624/SM6200B | 1.0 | 2.0 |
| ¹ | ACID COMPOUNDS | | | |
| | 2-Chlorophenol (95-57-8) | 625 | 1.0 | 2.0 |
| | 2,4-Dichlorophenol (120-83-2) | 625 | 0.5 | 1.0 |
| | 2,4-Dimethylphenol (105-67-9) | 625 | 0.5 | 1.0 |
| | 4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol) | 625/1625B | 1.0 | 2.0 |
| | 2,4 dinitrophenol (51-28-5) | 625 | 1.0 | 2.0 |
| | 2-Nitrophenol (88-75-5) | 625 | 0.5 | 1.0 |
| | 4-nitrophenol (100-02-7) | 625 | 0.5 | 1.0 |
| | Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol) | 625 | 1.0 | 2.0 |
| | Pentachlorophenol (87-86-5) | 625 | 0.5 | 1.0 ¹⁰ |
| | Phenol (108-95-2) | 625 | 2.0 | 4.0 |
| | 2,4,6-Trichlorophenol (88-06-2) | 625 | 2.0 | 4.0 |
| ¹ | BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs) | | | |
| | Acenaphthene (83-32-9) | 625 | 0.2 | 0.4 |
| | Acenaphthylene (208-96-8) | 625 | 0.3 | 0.6 |
| | Anthracene (120-12-7) | 625 | 0.3 | 0.6 |
| | Benzidine (92-87-5) | 625 | 12 | 24 |
| | Benzyl butyl phthalate (85-68-7) | 625 | 0.3 | 0.6 |

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² μg/L unless specified | Quantitation Level (QL)³ μg/L unless specified |
|--|--|--|---|--|
| | Benzo(a)anthracene (56-55-3) | 625 | 0.3 | 0.6 |
| | Benzo(j)fluoranthene (205-82-3) | 625 | 0.5 | 1.0 |
| | Benzo(r,s,t)pentaphene (189-55-9) | 625 | 0.5 | 1.0 |
| | Benzo(a)pyrene (50-32-8) | 610/625 | 0.5 | 1.0 |
| | 3,4-benzofluoranthene (Benzo(b)fluoranthene) (205-99-2) | 610/625 | 0.8 | 1.6 |
| | 11,12-benzofluoranthene (Benzo(k)fluoranthene) (207-08-9) | 610/625 | 0.8 | 1.6 |
| | Benzo(ghi)Perylene (191-24-2) | 610/625 | 0.5 | 1.0 |
| | Bis(2-chloroethoxy)methane (111-91-1) | 625 | 5.3 | 21.2 |
| | Bis(2-chloroethyl)ether (111-44-4) | 611/625 | 0.3 | 1.0 |
| | Bis(2-chloroisopropyl)ether (108-60-1) | 625 | 0.3 | 0.6 |
| | Bis(2-ethylhexyl)phthalate (117-81-7) | 625 | 0.1 | 0.5 |
| | 4-Bromophenyl phenyl ether (101-55-3) | 625 | 0.2 | 0.4 |
| | 2-Chloronaphthalene (91-58-7) | 625 | 0.3 | 0.6 |
| | 4-Chlorophenyl phenyl ether (7005-72-3) | 625 | 0.3 | 0.5 |
| | Chrysene (218-01-9) | 610/625 | 0.3 | 0.6 |
| | Dibenzo (a,j)acridine (224-42-0) | 610M/625M | 2.5 | 10.0 |
| | Dibenzo (a,h)acridine (226-36-8) | 610M/625M | 2.5 | 10.0 |
| | Dibenzo(a-h)anthracene (53-70-3)(1,2,5,6-dibenzanthracene) | 625 | 0.8 | 1.6 |
| | Dibenzo(a,e)pyrene (192-65-4) | 610M/625M | 2.5 | 10.0 |
| | Dibenzo(a,h)pyrene (189-64-0) | 625M | 2.5 | 10.0 |
| | 3,3'-Dichlorobenzidine (91-94-1) | 605/625 | 0.5 | 1.0 |
| | Diethyl phthalate (84-66-2) | 625 | 1.9 | 7.6 |
| | Dimethyl phthalate (131-11-3) | 625 | 1.6 | 6.4 |
| | Di-n-butyl phthalate (84-74-2) | 625 | 0.5 | 1.0 |
| | 2,4-dinitrotoluene (121-14-2) | 609/625 | 0.2 | 0.4 |
| | 2,6-dinitrotoluene (606-20-2) | 609/625 | 0.2 | 0.4 |

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² µg/L unless specified | Quantitation Level (QL)³ µg/L unless specified |
|--------------|--|--|---|--|
| | Di-n-octyl phthalate (117-84-0) | 625 | 0.3 | 0.6 |
| | 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7) | 1625B | 5.0 | 20 |
| | Fluoranthene (206-44-0) | 625 | 0.3 | 0.6 |
| | Fluorene (86-73-7) | 625 | 0.3 | 0.6 |
| | Hexachlorobenzene (118-74-1) | 612/625 | 0.3 | 0.6 |
| | Hexachlorobutadiene (87-68-3) | 625 | 0.5 | 1.0 |
| | Hexachlorocyclopentadiene (77-47-4) | 1625B/625 | 0.5 | 1.0 |
| | Hexachloroethane (67-72-1) | 625 | 0.5 | 1.0 |
| | Indeno(1,2,3-cd)Pyrene (193-39-5) | 610/625 | 0.5 | 1.0 |
| | Isophorone (78-59-1) | 625 | 0.5 | 1.0 |
| | 3-Methyl cholanthrene (56-49-5) | 625 | 2.0 | 8.0 |
| | Naphthalene (91-20-3) | 625 | 0.3 | 0.6 |
| | Nitrobenzene (98-95-3) | 625 | 0.5 | 1.0 |
| | N-Nitrosodimethylamine (62-75-9) | 607/625 | 2.0 | 4.0 |
| | N-Nitrosodi-n-propylamine (621-64-7) | 607/625 | 0.5 | 1.0 |
| | N-Nitrosodiphenylamine (86-30-6) | 625 | 0.5 | 1.0 |
| | Perylene (198-55-0) | 625 | 1.9 | 7.6 |
| | Phenanthrene (85-01-8) | 625 | 0.3 | 0.6 |
| | Pyrene (129-00-0) | 625 | 0.3 | 0.6 |
| | 1,2,4-Trichlorobenzene (120-82-1) | 625 | 0.3 | 0.6 |
| ¹ | PESTICIDES/PCBs | | | |
| | Aldrin (309-00-2) | 608 | 0.025 | 0.05 |
| | alpha-BHC (319-84-6) | 608 | 0.025 | 0.05 |
| | beta-BHC (319-85-7) | 608 | 0.025 | 0.05 |
| | gamma-BHC (58-89-9) | 608 | 0.025 | 0.05 |
| | delta-BHC (319-86-8) | 608 | 0.025 | 0.05 |
| | Chlordane (57-74-9) | 608 | 0.025 | 0.05 |
| | 4,4'-DDT (50-29-3) | 608 | 0.025 | 0.05 |
| | 4,4'-DDE (72-55-9) | 608 | 0.025 | 0.05 ¹⁰ |
| | 4,4' DDD (72-54-8) | 608 | 0.025 | 0.05 |
| | Dieldrin (60-57-1) | 608 | 0.025 | 0.05 |
| | alpha-Endosulfan (959-98-8) | 608 | 0.025 | 0.05 |
| | beta-Endosulfan (33213-65-9) | 608 | 0.025 | 0.05 |

| | Pollutant & CAS No. (if available) | Recommended Analytical Protocol | Detection Level (DL)² <i>µg/L unless specified</i> | Quantitation Level (QL)³ <i>µg/L unless specified</i> |
|--|---|--|--|---|
| | Endosulfan Sulfate (1031-07-8) | 608 | 0.025 | 0.05 |
| | Endrin (72-20-8) | 608 | 0.025 | 0.05 |
| | Endrin Aldehyde (7421-93-4) | 608 | 0.025 | 0.05 |
| | Heptachlor (76-44-8) | 608 | 0.025 | 0.05 |
| | Heptachlor Epoxide (1024-57-3) | 608 | 0.025 | 0.05 |
| | PCB-1242 (53469-21-9) | 608 | 0.25 | 0.5 |
| | PCB-1254 (11097-69-1) | 608 | 0.25 | 0.5 |
| | PCB-1221 (11104-28-2) | 608 | 0.25 | 0.5 |
| | PCB-1232 (11141-16-5) | 608 | 0.25 | 0.5 |
| | PCB-1248 (12672-29-6) | 608 | 0.25 | 0.5 |
| | PCB-1260 (11096-82-5) | 608 | 0.13 | 0.5 |
| | PCB-1016 (12674-11-2) | 608 | 0.13 | 0.5 |
| | Toxaphene (8001-35-2) | 608 | 0.24 | 0.5 |

1. An X placed in this box means you must analyze for all pollutants in the group.
2. Detection level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.
3. Quantitation Level (QL) is equivalent to EPA's Minimum Level (ML) which is defined in 40 CFR Part 136 as the minimum level at which the entire GC/MS system must give recognizable mass spectra (background corrected) and acceptable calibration points. These levels were published as proposed in the Federal Register on March 28, 1997.